



# High-Dose Opioid Use

## Drug-Utilization Review

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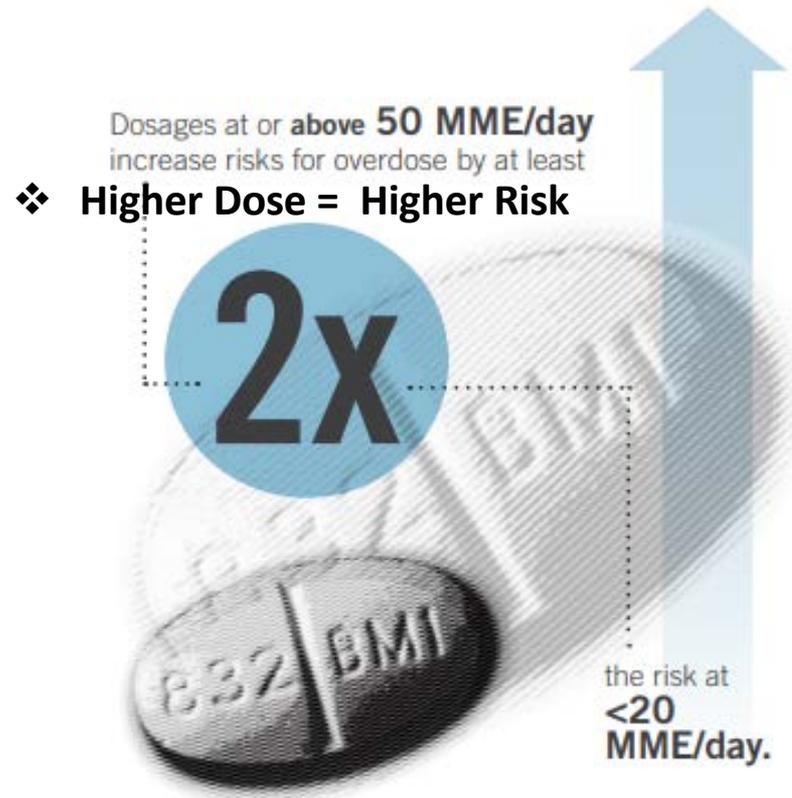
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# HIGH-DOSE OPIOID USE



- ❖ **MME (morphine milligram equivalents)**
  - ❖ used to measure the total daily dose of opioids
- ❖ **Higher Dose = Higher Risk**



# MME Calculation



- ❖ **1 – CALCULATE** each opioid
- ❖ **2 – CONVERT** to MMEs
- ❖ **3 – ADD** together

## Calculating morphine milligram equivalents (MME)

OPIOID (doses in mg/day except where noted)	CONVERSION FACTOR
Codeine	0.15
Fentanyl transdermal (in mcg/hr)	2.4
Hydrocodone	1
Hydromorphone	4
Methadone	
1-20 mg/day	4
21-40 mg/day	8
41-60 mg/day	10
≥ 61-80 mg/day	12
Morphine	1
Oxycodone	1.5
Oxymorphone	3

*These dose conversions are estimated and cannot account for all individual differences in genetics and pharmacokinetics.*

# MME Calculation



## ❖ Example

- ❖ Oxycodone 5mg, 1 tablet QID
- ❖ Morphine Sulfate 15mg, 1 tablet BID

## ❖ Calculate each drug:

- ❖ Oxycodone:  $5\text{mg} \times 4 \text{ tablets/day} = 20\text{mg/day}$
- ❖ Morphine Sulfate ER:  $15\text{mg} \times 2 \text{ tablets/day} = 30\text{mg/day}$

## ❖ Convert to MME:

OPIOID (doses in mg/day except where noted)	CONVERSION FACTOR
Oxycodone	1.5
Morphine	1

- ❖ Oxycodone:  $20\text{mg/day} \times 1.5 = 30 \text{ MME}$
- ❖ Morphine Sulfate:  $30\text{mg/day} \times 1 = 30 \text{ MME}$

## ❖ Add:

- ❖  $30 \text{ MME} + 30 \text{ MME} = 60 \text{ MME/day}$

# References



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